STATEMENT OF
ROBERT PERCIASEPE
ASSISTANT ADMINISTRATOR FOR WATER,
ENVIRONMENTAL PROTECTION AGENCY
TO THE
COMMITTEE ON AGRICULTURE, NUTRITION, AND FORESTRY
UNITED STATES SENATE

April 2, 1998

REDUCING WATER POLLUTION FROM ANIMAL FEEDING OPERATIONS

Mr. Chairman and members of the Committee, I am Robert Perciasepe, Assistant Administrator for Water at the United States Environmental Protection Agency (EPA).

I very much appreciate the opportunity to talk with you today about the Administration's efforts to restore and protect America's waters and the role that animal feeding operations can play in improving water quality.

Before coming to EPA, I was the Secretary of the Maryland Department of the Environment. In that job, I worked very closely with my colleagues in the Maryland Department of Agriculture and with officials from the U.S. Department of Agriculture (USDA). We realized how critical cooperation between our agencies was to meeting important natural resource goals like protecting Chesapeake Bay. I am very pleased that, over the past several years EPA and USDA have made good progress in building a solid foundation for productive cooperation among our programs. I want to thank the USDA leadership for their commitment to working together to find the best possible solutions to difficult problems, such as the environmental risks posed by large animal feeding operations.

I also want to thank Senator Harkin for his efforts to focus attention on animal feeding issues by introducing The Animal Agriculture Reform Act (S. 1323). Although EPA has concerns with some elements of the bill, it is important legislation because it recognizes the importance of a strong animal agriculture industry, the need for a national approach to management of animal wastes, and the value of a level playing field for all livestock sectors.

I have three major goals in speaking with you today --

- I want to briefly outline the big picture for clean water -- what are the problems and how we propose to solve the problems;
- I want to describe how animal feeding operations fit into the clean water picture; and
- I want to describe how we at EPA plan to work hand-in-hand with USDA to develop a joint, unified strategy to minimize the threats to the environment and public health posed by animal feeding operations.

I. CLEAN WATER -- THE BIG PICTURE

On February 19, 1998, at Baltimore's Inner Harbor, President Clinton and Vice President Gore announced the Administration's *Clean Water Action Plan*. This Action Plan, initiated on the 25th anniversary of the passage of the Clean Water Act (CWA), expresses our intent to finish the job of cleaning up America's rivers, lakes, and coastal waters to protect the environment and the health of all Americans.

Clean Water -- Successes and Remaining Challenges

The Action Plan recognizes that the quality of our waters has improved dramatically as a result of a cooperative effort by Federal, State and local governments to reduce water pollution and protect natural resources. All Americans can be proud of the progress the Nation has made toward clean water over the past 25 years.

- Twenty-five years ago, sewage treatment facilities served only 85 million people. Today, the number of people served by adequate sewage treatment has more than doubled to 173 million.
- Industrial pollution controls established since 1972 prevent billions of pounds of pollutants from being discharged each year.
- Twenty-five years ago, wetland losses were estimated at 460,000 acres per year but today, wetland losses have been reduced significantly.
- Since 1982, soil erosion from cropland has been reduced by more than one-third, saving over a billion tons of soil each year and substantially reducing sediments, nutrients and other pollutants to waters.

Despite significant progress in reducing water pollution, serious water quality problems persist throughout the country. Recent State reports of water quality conditions indicate that --

- 36% of monitored rivers and streams are impaired and another 8% are threatened;
- 39% of assessed lakes are impaired and another 10% are threatened; and
- 38% of assessed estuaries are impaired and another 4% are threatened.

Based on this monitoring information, States have identified about 15,000 individual waterbodies in 1996 that do not now meet clean water goals. States are updating these figures and will report revised, more accurate lists to EPA in April.

Last year, EPA worked with other Federal agencies, including USDA, States, Tribes, citizens, and private organizations to develop an information system to present diverse data about the health of aquatic systems in each of the over 2,000 watersheds in the country. This information system, called the Index of Watershed Indicators, also provides initial assessments of overall aquatic conditions in the watersheds. These assessments indicate that --

- 16% of watersheds in the continental U.S. have good water quality;
- 36% have moderate water quality problems;
- 21% have serious water quality problems; and
- 27% lack sufficient data to make an overall assessment.

The Remaining Water Pollution Problems

Speaking in very general terms, much of our progress in reducing water pollution has been the result of improving controls over discharges of sewage and industrial wastes. We need to continue to address these significant pollution sources, but today, the major challenge we face is to better manage polluted runoff from urban areas, construction sites, forest harvesting operations, and agriculture.

States report that the leading causes of water quality impairments include siltation, nutrients, bacteria, oxygen-depleting substances, metals, habitat alteration, pesticides, and organic toxic chemicals. These pollutants come from a wide variety of sources, including sewage treatment plants, urban runoff, combined sewers, storm

water discharges, resource extraction, removal of streamside vegetation, forestry, and agriculture (see table below).

Five Leading Sources of Water Quality Impairment Related to Human Activities (1996 State 305(b) Reports)			
Rank	**Rivers**	**Lakes**	**Estuaries**
1	**Agriculture**	**Agriculture**	Industrial Discharges
2	Municipal Sewage Treatment Plants	Unspecified Nonpoint Sources	Urban Runoff/Storm Sewers
3	Hydrologic Modification	Atmospheric Deposition	Municipal Point Sources
4	Habitat Modification	Urban Runoff/Storm Sewers	Upstream Sources
5	Urban Runoff/Storm Sewers	Municipal Point Sources	**Agriculture**

While many diverse sources contribute to water pollution, States report that agriculture is the most widespread source of pollution in the Nation's surveyed rivers. Based on these reports from all 50 States, we estimate that agriculture generates pollutants that degrade aquatic life or interfere with public use of 173,629 river miles (i.e. 25% of all river miles surveyed) and contributes to 70% of all water quality problems identified in rivers and streams.

Twenty-two States reported on the impacts of specific types of agriculture. Nonirrigated crop production leads the list of agricultural activities, affecting 36% of impaired river miles in these 22 States, followed by irrigated crop production, affecting 22% of impaired river miles. Taken as a group, animal operations, including feedlots and animal holding areas, affect 20% of impaired river miles, or about 35,000 river miles in these 22 States. Rangeland and pasture land are identified as affecting 12% and 11% of impaired river miles respectively.

Consequences of Water Pollution

Water pollution clearly degrades environmental quality, but it also diminishes recreational and economic opportunities and poses clear threats to public health.

- In the Gulf of Mexico, a hypoxic or "dead" zone (an area with low levels of oxygen), threatens the livelihood of fishermen. The area has excess amounts of nutrients from the Mississippi River watershed.

- In some Maryland and Virginia tributaries to the Chesapeake Bay and in the Neuse River in North Carolina, the microorganism Pfiesteria has killed fish and posed a risk to people. Other harmful algal blooms and biotoxins have also affected the health of people, in addition to harming fish, shellfish, and other wildlife. Pfiesteria and harmful algal blooms have been associated with excessive nutrients in water.

- Of the nation's 382 million acres of croplands, over 70 million acres suffer erosion rates that threaten long-term productivity. Poor land management and agricultural practices directly affect surface waters throughout the country.

- Polluted runoff from urban and agricultural areas adds sediment into waters that carry it downstream and deposit it into harbors or reservoirs. Federal and non-federal dredging in coastal areas and the disposal of dredged materials costs about $1 billion per year.

- In 1996, 2,193 fish consumption advisories were issued in 48 states. The presence of mercury, PCBs, chlordane, dioxin, and DDT was responsible for the majority of fish consumption advisories in 1996.

- Coastal States report unhealthy levels of pollution-related bacteria at swimming beaches. More than 2,500 beach closings and advisories were posted in 1996. Illnesses caused by these bacteria are of particular concern to families with children.

A New Approach to Restoring and Protecting Water Quality

After 25 years of progress, the Nations's clean water program is at a crossroads. Implementation of existing programs will not stop serious new threats to public health, living resources and the nation's waterways. We have made tremendous progress, but our existing programs lack the strength, resources, and framework to finish the job of restoring rivers, lakes and coastal waters. To fulfill the original goal of the Clean Water Act -- "fishable and swimmable" water for every American -- the Nation must chart a new course for clean water.

The Clean Water Action Plan announced by the President in February outlines a blueprint for the future clean water program including over 100 key actions organized around four key tools to achieve clean water goals.

- *A Watershed Approach:* The Action Plan envisions a new, collaborative effort by Federal, State, Tribal, and local governments, the public, and the private sector to restore and sustain the health of the Nation's watersheds. The watershed approach is the key to setting priorities and taking action to clean up waters.

- *Strong Federal and State Standards:* The Action Plan calls for Federal, State, and Tribal agencies to revise standards where needed and make existing programs more effective. Effective standards are key to protecting public health, preventing polluted runoff, and ensuring accountability.

- *Natural Resource Stewardship:* Most of the land in the Nation's watersheds is cropland, pasture, rangeland, or forests, and most of the water that ends up in rivers, lakes, and coastal waters falls on these lands first. Clean water depends on the conservation and stewardship of these natural resources. The Action Plan calls on Federal natural resource and conservation agencies to apply their resources and technical expertise to state and local watershed restoration and protection.

- *Informed Citizens and Officials*: Clear, accurate, and timely information is the foundation of a sound and accountable water quality program. Informed citizens and officials make better decisions about their watersheds. The Action Plan calls on Federal agencies to improve the information available to the public, governments, and others about the health of their watersheds and the safety of their beaches, drinking water, and fish.

To support the Action Plan's expanded program to restore and protect the Nation's waters, the President's FY 1999 budget proposes a Clean Water and Watershed Restoration Budget Initiative. The funding provided in this budget initiative will increase Federal financial support for clean water programs in FY 1999 by $568 million and by over $2.3 billion over the FY 1999-2003 period. Specifically, the Clean Water and Watershed Restoration Budget Initiative would --

- increase direct grant support to states and tribes to carry out a watershed approach to clean water;

- increase technical and financial assistance to farmers, ranchers, and foresters to reduce polluted runoff and enhance the natural resources on their lands;

- fund watershed assistance programs and grants to engage local communities and citizens in leadership roles in restoring their watersheds;

- accelerate progress in addressing critical water quality problems on Federal lands, including those related to roads, abandoned mines, riparian areas, and rangelands;

- expand and coordinate water quality monitoring programs; and

- increase efforts to restore nationally significant watersheds, such as the Florida Everglades and the San Francisco Bay-Delta.

II. ANIMAL FEEDING OPERATIONS (AFOs)

The term “animal feeding operation” refers to a wide range of animal operations, including large facilities raising thousands, or tens of thousands, of animals. These large facilities are referred to as “concentrated animal feeding operations” or CAFOs and generally have in excess of 1,000 animal units (i.e. 1,000 slaughter cattle or a comparable number of other animals). In a few cases where an animal feeding operation poses a direct threat to water quality, EPA or State agencies has addressed facilities in the 300-1,000 animal unit size range.

An Evolving Industry

The nature of the animal feeding industry has changed dramatically over the past two decades. Advances in technologies for raising and feeding animals, decreases in transportation costs, and organizational changes in agricultural businesses and corporations have transformed the industry. The data overwhelmingly shows a shift in the industry from smaller to much larger operations.

The total number of animal feeding operations has declined in every sector -- beef cattle, dairy, poultry (including layers, broilers, and turkeys), and swine. During this same time period, the total number of animals in each facility has increased (see Figure 1 below).

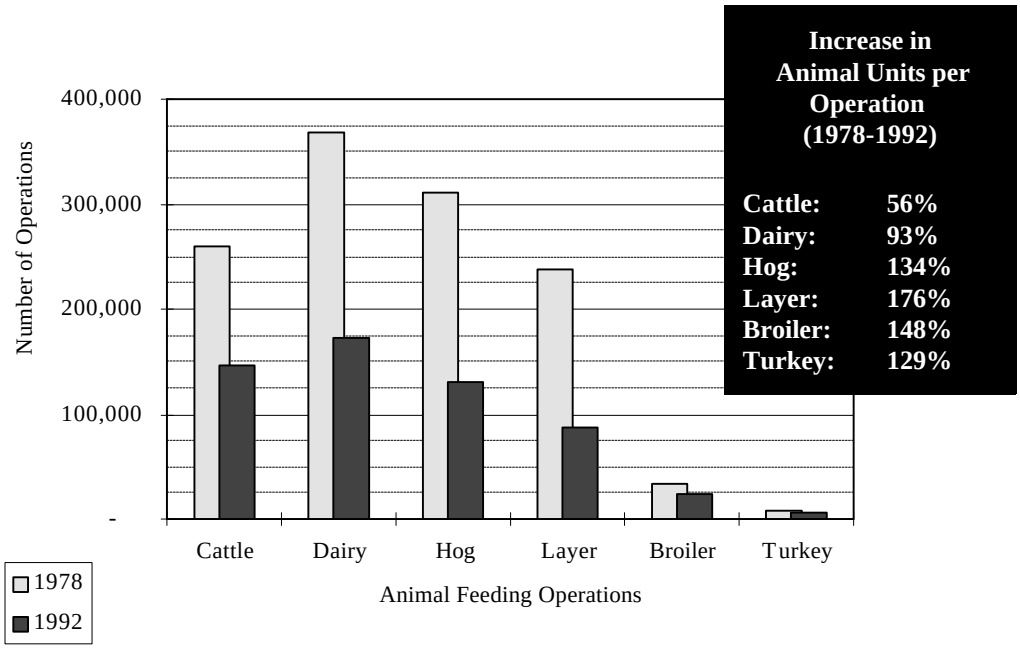

Figure 1: **Industry Consolidation of Cattle, Dairy, Hog, Broiler, Layer, and Turkey Animal Feeding Operations** (Note: Numbers in box show percent increase in the average number of animal units per animal feeding operation, not just the change in the number of operations. Data source: *Animal Agriculture: Information on Waste Management and Water Issues*, General Accounting Office, 1995.)

While Figure 1 shows changes in national averages, examples from specific States are illustrative of current trends.

- In Illinois, the average number of turkeys per turkey farm increased by 2,686% between 1982 and 1992. Other States with large shifts toward consolidation include North Dakota (1,194% over the same time period), Kansas (868%), and South Dakota (767%). The number of turkey farms in these States declined by 37%, 66%, 30%, and 71%, respectively. (Source: *1992 Census of Agriculture)*.

- In North Carolina, the average number of hogs per hog farm increased by 578% between 1982 and 1992. Similarly, Arkansas experienced a 271% increase, and California and Virginia each experienced a 202% increase. These increases in the number of hogs per hog farm occurred while each State experienced a decline in the number of hog farms by 62%, 50%, 54%, and 71%, respectively. (Source: *1992 Census of Agriculture*)

Water Quality Impacts

As noted above, State reports of water quality conditions indicate that agriculture is the single largest source of water pollution in rivers and lakes, and these reports

suggest that animal feeding operations are a significant part of this problem. As noted above, twenty-two States reported on the impacts of specific types of agriculture, and identified animal operations -- including feedlots and animal holding areas -- as the third largest type of agricultural activity affecting water quality and impacting 20% of impaired river miles, or about 35,000 river miles, in these 22 States.

Animal feeding operations can impair water quality in a number of ways. If not collected and treated properly, animal manure can pollute surface and/or ground water with excess nutrients, such as nitrogen and phosphorus. Animal manure is commonly spread on agricultural land for its nutrient and organic value for both crops and the soil. If the manure is not spread in accordance with a nutrient management plan (which applies nutrients at the rates which crops can use them), nitrogen and phosphorus will leave farms and enter waterbodies, causing depletion of dissolved oxygen and eutrophication. In addition, grazing animals can cause streambank erosion and erosion from fields which have been overgrazed.

Studies have shown that animal feeding operations, and particularly when several of these facilities are concentrated in a single watershed, can increase nutrient pollution to a river or stream. For example, a study of Herrings Marsh Run in the coastal plain of North Carolina showed that nitrate levels in stream and ground water were highest in areas with the greatest concentration of swine and poultry production. (Hunt, P.G., et. al. 1995. *Impact of animal waste on water quality in an eastern coastal plain watershed*. Animal Waste and the Land-Water Interface, Kenneth Steele, Ed., Lewis Publishers, Boca Raton, FL, 589 pp.)

Illinois EPA studies and field investigations have confirmed that runoff from confined animal feeding operations can adversely impact surface water resources in Illinois. Observed effects include increases in ammonia-nitrogen concentrations resulting from animal wastes and fish kills as a result of manure application on frozen ground. (Ackerman and Taylor, 1995, *Stream Impacts due to Feedlot Runoff*. Animal Waste and the Land-Water Interface, Kenneth Steele, Ed., Lewis Publishers, Boca Raton, FL, 589 pp.)

South Dakota monitored nine feedlots to document the water quality benefits of installing animal waste management systems. Most feedlots studied had a negative effect on water quality through increased loadings of nutrients. After installation of animal waste management systems, several feedlots exhibited evidence of improving water quality in streams. (South Dakota Association of Conservation Districts, S.D. Department of Environment and Natural Resources, and USDA Natural Resources Conservation Service, 1996, *Final Report - Animal Waste Management Team*).

AFOs can also cause catastrophic effects locally. In June 1995, animal waste contained in an eight-acre lagoon in North Carolina burst through its dike, spilling

approximately 22 million gallons of animal waste into the New River. The spill was twice the size of the Exxon Valdez oil spill, and reportedly killed fish along a 19-mile downstream area. It was the worst of six reported spills in the State during the summer of 1995 (EPA Office of Inspector General, March 1997, Animal Waste Disposal Issues, Audit Report No. E1XWF7-13-0085-7100142).

Several additional examples of the water quality impairment resulting from large animal feeding operations are described in Attachment 1 of this testimony.

Past Efforts to Address Water Quality Impacts of AFOs

The serious water quality impacts of large AFOs have been recognized for many years. In 1974, EPA issued a national effluent guideline that established national minimum discharge standards for large operations (i.e. feedlots). These large concentrated animal feeding operations (CAFOs) are considered "point sources" subject to a permit under the Clean Water Act.

In the 25 years since the Clean Water Act's passage, EPA and the States have emphasized the more traditional point sources of pollution such as municipal wastewater treatment plants, and industrial discharges. Of the approximately 6,600 CAFOs in the United States, about one-quarter are covered by Clean Water Act discharge permits today.

EPA has developed a number of programs to support animal feeding operations and to address the potential environmental and public health impacts from these facilities --

- Under section 319 of the Clean Water Act, EPA provides just over $100 million in grants to States each year to help implement nonpoint source programs and fund nonpoint source projects designed to demonstrate controls and document effectiveness of best management practices in different settings, including animal feeding operations. The President's FY 1999 Budget Initiative for the *Clean Water Action Plan* would double this funding to $200 million per year.

- EPA's Nonpoint Source Control Program also works with nonprofit organizations, States, commodity groups and the public to promote voluntary implementation of nonpoint source controls.
- The State Revolving Loan Funds created by each State under authority in the Clean Water Act can provide loans for projects that address pollution from nonpoint sources, including animal feeding operations. State loan funds make loans worth over $2 billion each year, and a number of States have funded

projects related to animal waste, such as waste storage ponds and composting facilities.

In addition, EPA has worked closely with USDA to develop a number of efforts related to animal feeding operations including the Environmental Quality Incentive Program, the Buffer Initiative, and other conservation activities. EPA was also an active participant in the National Environmental Dialogue on Pork Production.

EPA's Draft Animal Feeding Operation Strategy

EPA recently released a draft *Strategy for Addressing Environmental and Public Health Impacts from Animal Feeding Operations (AFOs*).

Under development for over a year, the EPA draft AFO Strategy is the product of extensive discussions with our Federal and State partners, and livestock, environmental, and public interest groups. The draft EPA AFO Strategy includes specific short-term and long-term activities to substantially expand existing efforts to minimize the environmental and public health threats of AFOs. The draft Strategy establishes five overall objectives --

- **Expand Compliance and Enforcement Efforts:** EPA will work with States to expand the use of compliance assistance and enforcement to ensure that existing Clean Water Act (CWA) requirements are implemented. EPA's Office of Enforcement and Compliance Assurance (OECA) has developed a Compliance Assurance Implementation Plan for Concentrated Animal Feeding Operations (CAFOs), the first product identified in EPA's draft AFO Strategy.

- **Improve Clean Water Act Permits:** EPA will work with States to significantly expand the number of facilities that currently have CWA permits, and to include permit conditions that address water pollution problems associated with animal manure management.

- **Focus on Priority Watersheds:** EPA and States, with the assistance of USDA and other partners, will summarize data on the location of AFOs and CAFOs to identify watersheds that are a priority for action.

- **Revise Existing Regulations:** EPA will work with States, the regulated community, and citizens to revise both the CWA permit program regulations and the existing effluent limitations guidelines for feedlots.

- **Increase EPA/USDA Coordination:** EPA, USDA, and other partners will coordinate more closely on the full range of AFO-related activities.

III. A JOINT USDA/EPA NATIONAL AFO STRATEGY

EPA worked closely with USDA in developing the EPA draft AFO Strategy. Through this process, we at EPA gained an appreciation of the significant benefits that would result from expanding EPA/USDA coordination and cooperation on issues related to AFOs. In addition, over the past several months, EPA and USDA worked very closely and effectively to develop the *Clean Water Action Plan.* We concluded that the best approach to addressing water quality problems resulting from AFOs was to establish a joint, USDA/EPA strategy. The *Clean Water Action Plan* includes a clear commitment to the creation and implementation of a joint USDA-EPA national AFO strategy to minimize the environmental and public health impacts of AFOs.

Joint EPA/USDA AFO Strategy -- Key Elements

The EPA and USDA have agreed on the key elements of a joint AFO Strategy. These key elements are described in the *Clean Water Action Plan* and include --

- ***Coordinate program and interagency cooperation*.** USDA and EPA will work together in common areas of interest, including data collection and management, technical standards development, monitoring, and establishment and tracking of appropriate environmental performance measures. For example, USDA will continue to review and revise comprehensive technical standards and educational programs for AFOs in cooperation with other Federal agencies. In addition, USDA and EPA will develop a plan to ensure that appropriate management systems are incorporated into Clean Water Act permits by States and EPA.

- ***Develop and implement comprehensive management systems for AFOs.*** USDA and EPA will work to establish environmentally sustainable systems that will offer practical and cost-effective approaches to managing manures and carcasses. For example, USDA and EPA will establish comprehensive and verifiable management systems for AFOs by 2002, engage stakeholders to achieve use of farm-specific nutrient budgets for at least 50% of AFOs by 2005, and promote development of marketable products from animal wastes and carcasses from 1998 onward. Comprehensive management systems should be incorporated into Clean Water Act discharge permits issued by EPA and States. EPA will work with States to issue Clean Water Act permits to all CAFOs by 2005, consistent with any new regulations the Agency will have promulgated.

- ***Revise and strengthen existing permit regulations.*** EPA will work with USDA and States to: revise the Clean Water Act discharge regulations, including comprehensive management measures (e.g., land application), by 2002; revise the existing feedlots effluent limitations guideline for poultry and swine by 2001 and for beef and dairy cattle by 2002; and, develop improved tools for writing discharge permits under current regulations (e.g., case-by-case designation guidance and guidance on establishing best management practices by 1998.

- ***Provide incentives to enhance environmental protection.*** Federal agencies will encourage environmental protection beyond that required by regulatory controls through new initiatives such as an awards program recognizing efforts by AFOs to reduce pollution (by 2000); through the provision of incentives for the conversion of animal wastes into marketable products (by 2004); and through the formation of a public/private partnership to create market incentives to improve environmental performance.

- ***Develop a coordinated plan for research.*** Federal agencies will, in coordination with stakeholders, develop a coordinated plan for research, development, and assessment that establishes priorities for developing ways to better manage nutrients, pathogens, and other pollutants; modify animal diets to reduce nutrients in manure; mitigate sites with excess pollutants; and assess impacts of best management practices from farm and watershed perspectives.

- ***Develop watershed nutrient budgets.*** Federal agencies will determine the relative contributions of nutrients in watersheds from all sources. USDA will publish by 1998 data on counties having potential nutrient excess from animal manure. EPA and USDA will estimate by 2000 a baseline of nutrient loads to the watersheds identified above from animal data, fertilizer sales, Census of Agriculture, permit limits, and other estimates. USDA will revise the Census of Agriculture to include waste management practices by the 2002 Census.

- ***Target activities to priority watersheds.*** Federal and state agencies should ensure that activities such as permitting, inspections, enforcement, funding, education, outreach, and technical assistance for AFOs are targeted to priority watersheds. For example, EPA, with support from USDA, States, and Tribes, will identify by 1999 watersheds at greatest risk from AFOs. EPA and USDA will develop criteria for and demonstrate the effectiveness of targeting coordinated assistance and federal environmental subsidies to states and AFOs by 2000. EPA will also increase enforcement of existing permits and unpermitted discharges, require new permits where appropriate, and use emergency powers to address situations presenting an imminent and substantial endangerment, where appropriate.

- ***Encourage establishment of a certification program.*** The Strategy will encourage establishment of a certification program to ensure effective development and implementation of management systems for unpermitted AFOs.

Joint AFO Strategy Development Process

EPA and USDA have already begun to develop this joint AFO Strategy. USDA convened an initial, organizational meeting of an interagency workgroup to draft the Strategy earlier this week.

The workgroup will solicit the views and comments of interested parties on issues related to the Strategy. In addition, EPA expects to participate in a National Forum on issues relating to animal feeding operations to be hosted by Senator Harkin in early May.

After the draft joint strategy is released in July, EPA and USDA plan to hold public hearings and otherwise solicit public input on the draft strategy. All of these activities will culminate in a final USDA/EPA AFO Strategy in November 1998.

Relation of Proposed Legislation to Joint Strategy

S. 1323 has played a critical role in advancing awareness of the need to develop an effective approach to the environmental and public health risks posed by large AFOs. The bill has provided an excellent basis for discussion of the issues related to AFOs and has facilitated the development of the basic outline of the joint USDA/EPA AFO Strategy now under development.

One of the most valuable aspects of the bill is that it makes a clear case for a national commitment to effective management of animal wastes and would provide a level playing field for all livestock sectors. Another useful provision of the bill is support for proper land application of manure.

Although we recognize that several of the proposals in S. 1323 would support the effective implementation of a national strategy to address environmental problems related to AFOs, and we support strengthening national pollution control that levels the playing field for these large facilities, the Administration cannot support the bill because it would establish a separate regulatory regime in the Department of Agriculture that would duplicate EPA's programs. In addition, the Administration believes that the bill lack flexibility to explore alternatives for handling excess wet animal waste.

EPA's major concern with the bill is that it does not recognize the existing role of Clean Water Act programs in reducing water pollution from large animal feeding operations. The bill would place substantial regulatory responsibilities with USDA. This proposal would duplicate the existing permit program established under the Clean Water Act that is now a key vehicle for implementing animal waste management practices. This existing permit program is substantially delegated to State agencies and is a proven, effective, and efficient mechanism to protect water quality. We recommend that all regulatory functions associated with the legislation be made the responsibility of EPA and that they not duplicate current EPA functions.

As noted above, the proposed joint EPA/USDA AFO Strategy will examine opportunities to draw on the best, most proven capabilities of both EPA and USDA. USDA has unmatched expertise in working with producers on the ground and applying first-rate technical guidelines in specific locations. EPA and States have proven their ability to implement permit programs that can provide a vehicle for implementing site specific water pollution controls. Both agencies have significant resources to support producers in implementing improved management practices.

A major objective of the workgroup now developing the joint USDA/EPA AFO Strategy will be to find the best mix of existing authorities and agency skills to deliver technically sound and appropriate water pollution control practices for the animal feeding industry. The development of the joint strategy will also give USDA and EPA the chance to carefully define and schedule the resources Federal and State agencies will need to commit to this area.

In addition, by working over the next several months to develop a joint national strategy, USDA and EPA will be able to work closely with a range of groups including the State environmental and agriculture agencies, land grant universities, and other academic institutions, the livestock industry, and public interest groups. The input and involvement of these groups is critical to the success of the joint Strategy.

CONCLUSION

Farmers were among the first stewards of our Nation's natural resources and farmers consistently recognize the value of protecting water quality and the environment. By working with the farm community and others, I am confident that USDA and EPA can jointly develop a sound, common sense approach to reducing the environmental and public health threats posed by large animal feeding operations.

I thank the Committee and will be happy to answer questions.

###

TESTIMONY OF ROBERT PERCIASEPE
ATTACHMENT 1
CASE STUDIES

1) Upper North Bosque Watershed, Texas

Erath County, Texas, located in the Upper North Bosque watershed, is home to more than 150 dairies with over 100,000 cows. These dairies produce 2 million tons of manure annually. The headwaters of the Upper North Bosque River, upstream of the city of Stephenville are experiencing elevated levels of fecal coliform bacteria and nutrients. The elevated fecal coliform bacteria levels prevent the waterbody from supporting contact recreational uses. Nitrogen and phosphorus levels are elevated and contribute to excessive phytoplankton and related algal growths which in turn reduce the oxygen available to aquatic life. Depressed dissolved oxygen levels in the river segment allow only partial support of its aquatic life use. These elevated levels impair the ability of this water body to fully meet either recreational use or aquatic life protection in the river.

Agricultural operations have been identified as the major contributor to nonpoint source pollution of the Upper North Bosque River. Currently, approximately 60% of the large facilities in Erath County (117 CAFOs) are covered under the EPA Region 6 General Permit for Concentrated Animal Feeding Operations ("no discharge" permit). The Region 6 General Permit does not allow any discharge of wastewater into the waters of the United States. The remaining 40% of the dairies are either large facilities that have not yet been permitted or are small-scale dairies that are not currently permitted because they do not meet the definition of facilities subject to the permit requirements.

The draft EPA AFO Strategy would improve the environmental protection of the Upper North Bosque watershed in several ways. It would provide the resources required to inspect and permit many of the dairy facilities that are not permitted and that may be contributing significantly to pollution in this water body. The strategy will also enable EPA to provide both small and large animal feeding operations with the tools and knowledge necessary to implement an environmentally sound waste management plan and continuing to operate an economically sustainable business.

2) Premium Standard Farms, Missouri

Premium Standard Farms, the Nation's fifth largest pork producer in 1996, operates 15 hog farms in Mercer, Putnam, and Sullivan counties in northern Missouri. The Whitetail Hog Farm alone raises 1.6 million hogs each year, approximately 2 percent of the national total. The 15 operations generate 31 times more wastewater each year than a city the size of Columbia, Missouri.

From August through December 1995, seven separate incidents at Premium Standard farms in northern Missouri released hog urine and manure into Missouri waters, six of which totaled more than 55,000 gallons. The Missouri Department of Natural Resources reported that more than 178,000 fish in Spring Creek, Mussel Fork Creek, and Blackbird Creek were killed, and the Department of Conservation indicated that the spills killed all aquatic life along miles of Missouri's waterways.

On December 26, 1995, at the Whitetail Hog Farm, a crack in a pipe designed to carry waste from a hog-raising building to a sewage lagoon released more than 35,000 gallons of wastewater. The wastewater flowed into nearby Blackbird Creek, killing fish and flowing into neighboring farmland.

In addition to these waste containment problems, in January 1996, State inspectors reported a widespread pattern of improper animal waste disposal at Premium Standard farms. The Missouri Department of Natural Resources cited Premium Standard for failing to comply with permit requirements for land application of wastewater at all of the 15 farms. State inspectors determined that Premium Standard's wastewater flow was about 10 million gallons more than the approved maximum flow of 84 million gallons. In addition, the Department of Natural Resources found that one of the fish kills in August 1995 was caused by improper land application at Premium Standard's Green Hills Farm.

Under the AFO Strategy, EPA will promote enforcement and compliance tools to facilitate more rapid and effective enforcement at facilities violating the Clean Water Act requirements. EPA will work with states to develop targeted enforcement and compliance strategies. Compliance actions will include use of additional best management practices according to USDA technical standards.

3) Tulsa, Oklahoma

In the Tulsa's municipal lakes watershed, CAFOs are producing annually about 8.2 million pounds of nitrogen and 2.5 million pounds of phosphorus in the form of animal manure. These production levels have doubled in the past two decades, largely resulting from growth in the poultry industry. Runoff from these facilities is leading to increased concentrations of phosphorus and nitrogen in the lakes, which provide drinking water to more than 600,000 residents.

To respond to these problems, a watershed management team has been formed and charged with developing solutions for the 230,000-acre watershed. The team consists of representatives from the poultry industry, universities, tribes, as well as local, State (both Oklahoma and Arkansas), and Federal agencies. In addition, the City of Tulsa has developed an extensive geographic information system (GIS) database with information on all animal operations, their operators, and soil and water samples taken in the watershed by various local, State, and Federal agencies. This information will help inform the planning decisions made by the watershed management team.

This case relates to the draft EPA AFO Strategy in two ways. First, it exemplifies the type of activity which U.S. EPA seeks to encourage across the nation. Implementation of the AFO Strategy will involve the development of State-specific strategies on permitting, compliance, and enforcement (which should incorporate differences across watersheds); as well as data collection efforts to help inform watershed planning decisions regarding AFOs and CAFOs. Second, implementation of the AFO Strategy will result in the development of both regulatory and voluntary tools upon which States and municipalities can rely to protect the environment and public health.

###